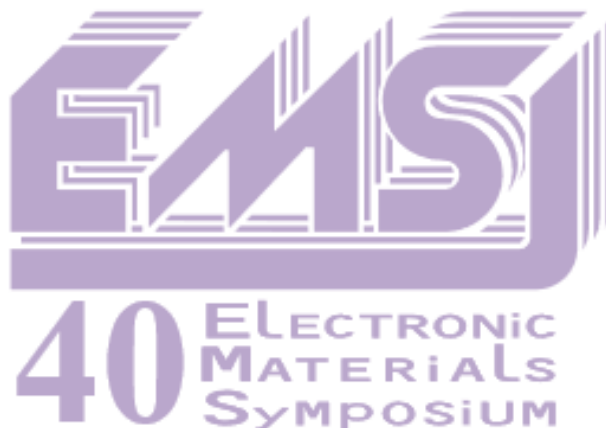


第 40 回電子材料シンポジウム

40th Electronic Materials Symposium

EMS-40



ADVANCE PROGRAM Oct. 11th (Mon.) – 13th (Wed.), 2021
Online <http://ems.jpn.org/>

	Oct. 11th, Monday	Oct. 12th, Tuesday	Oct. 13th, Wednesday		
10:00	Opening Session (10:00 - 10:10)	Plenary Session 2 (10:00 - 11:00)	Plenary Session 3 (10:00 - 11:00)	10:00	
	Plenary Session 1 (10:10 - 11:40)	Industrial Session 1 (11:00 - 11:30)	Industrial Session 5 (11:00 - 11:30)	11:00	
11:00		Session Tu1 (11:30 - 12:00)	Tutorial (11:30 - 12:30)	12:00	
12:00	Free Time (Lunch) (11:40 - 13:00)	Session Tu2 (12:00 - 12:30)		Free Time (Lunch) (12:30 - 13:20)	13:00
13:00	Poster Session 1 P1-A (13:00 - 14:15) P1-B (14:15 - 15:30)	Industrial Session 2 (12:30 - 13:10)	Industrial Session 6 (13:20 - 14:00)	14:00	
14:00		Free Time (Lunch) (13:10 - 14:00)	Special Session (14:00 - 14:30)	15:00	
15:00		Session Tu3 (14:00 - 14:30)	Special Session (14:30 - 14:40)	Special Session (15:10 - 15:40)	16:00
16:00		Session Tu4 (14:30 - 15:00)	Special Session (15:40 - 16:20)		
17:00		Industrial Session 3 (15:00 - 15:30)	Session Tu5 (15:30 - 16:00)	Special Session (16:20 - 16:50)	17:00
18:00	(15:30 - 15:40)	Session Tu6 (16:00 - 16:30)	Closing Session (16:50 - 17:10)	18:00	
19:00	Poster Session 2 P2-A (15:40 - 16:55) P2-B (16:55 - 18:10)	Industrial Session 4 (16:30 - 17:00)			
20:00	Free Time (18:10 - 20:00)	Session Tu7 (17:00 - 17:30)	*The time highlighted with this color is for break, advertisement and announcement.	20:00	
21:00		(17:30 - 17:40)			
	Free Time (18:10 - 20:00)	EMS 40th Anniversary Ceremony (17:40 - 18:40)	*The time highlighted with this color is for break, advertisement and announcement.	21:00	
		Break (18:40 - 20:00)			
	Global Session (20:00 - 21:30)	Banquet (20:00 -)			

PROGRAM

【October 11th, Monday】

Opening Session (10:00-10:10)

Plenary Session 1 (10:10-11:40)

Chair: Y. Fujiwara (Osaka University)

Plenary-1 13:10 (90min)
Green Society and the Role of Electronic Materials
H. Ohno
Tohoku University

Lunch (11:40-13:00)

Poster Session 1 (13:00-15:30)

[Session P1-A (13:00-14:15)]

P1-A01 (online video + poster)
GaAs related core-multishell nanowires having GaNAsBi well grown by molecular beam epitaxy
Y. Torigoe, K. Yoshikawa, M. Okujima, S. Mori, M. Yukimune, and F. Ishikawa
Ehime University

P1-A02 (online video + poster)
Direct precipitation of multilayer graphene using crystallized Ni catalyst Smooth stitching of graphene 2D islands
M.Tomoaki, K. Mita and N.Shigeya
Meijo University

P1-A03 (online video + poster)
High-rate GaN crystal growth by the suppression of polycrystal formation at a high temperature above 1250°C using the OVPE method
A. Shimizu*, S. Usami*, M. Kamiyama*, M. Imanishi*, M. Maruyama*, M. Yoshimura**, M. Hata***, M. Isemura****, and Y. Mori*
*Graduate School of Engineering, Osaka University, **ILE, Osaka University, *** Itochu Plastics Inc., ****Sosho-Ohshin Inc.

P1-A04 (online video + poster)
Preliminary growth and uniformity of high Al composition AlGaIn-based DUV-LEDs targeting wavelengths around 230 nm
J. Yoshinaga, Y. Yano, G. Piao, H. Tokunaga, S. Koseki, M. Jo and H. Hirayama
Taiyo Nippon Sanso Corporation, RIKEN

P1-A05 (online video + poster)
GaN-MOVPE for void formation on SiC/Si substrates with rough surface
T. Oku, T. Momose, Y. Shimogaki, and M. Deura
The University of Tokyo

P1-A06 (online video + poster)
Growth and Raman characterization of non-Bernal stacking few-layer graphene by alcohol CVD method
T. Asada, S. Yabuta, T. Araki and S. Mori
Ritsumeikan University

P1-A07 (online video + poster)
Valence band modulation in $\text{MgO}_{1-x}\text{Y}_x$ (Y = S, Se) alloys
Y. Ota*, K. Kaneko**, T. Onuma***, and S. Fujita**
*TIRI, **Kyoto University, ***Kogakuin University

P1-A08 (online video + poster)
Anti-Stokes photoluminescence of GaAs:Er,O for laser cooling in photonic crystal nano-cavity
Y. Nakayama*, M. Ogawa**, Y. Harada*, J. Tatebayashi**, T. Kita*, and F. Fujiwara**
*Kobe University, **Osaka University

P1-A09 (online video + poster)

Nitrogen-displacement-related hole traps in MOVPE-grown homoepitaxial p-type GaN

M. Endo*, M. Horita**, and J. Suda**,

*Nagoya University, **Institute of Materials and System for Sustainability

P1-A010 (online video + poster)

Observation of the electric field intensity distribution of surface phonon polaritons on SiC

Y. Kanno*, T. Dougakiuchi**, Y. Kawada**, G. Takebe**, and A. Ono*

*Shizuoka University, **Hamamatsu Photonics K.K.

P1-A011 (online video + poster)

Waveguide loss measurements in III-nitride laser structures

K. Ogasawara, S. Sakai, T. Okumura, K. Naniwae and A. A. Yamaguchi

Kanazawa Institute of Technology

P1-A012 (online video + poster)

Correlation Between MPPL and Raman Mapping Images of GaN

for Nondestructive Identification of Threading Dislocations

M. Tsukakoshi, T. Tanikawa, M. Uemukai and R. Katayama

Graduate School of Engineering, Osaka University

P1-A013 (online video + poster)

Demonstration of Eu-doped GaN resonant cavity LEDs

using conductive AlInN/GaN DBR mirrors with high reflectivity

S. Kobayashi, S. Ichikawa, K. Shiomi, J. Tatebayashi, and Y. Fujiwara

Osaka University

P1-A014 (online video + poster)

Fabrication of Orientation Modulated GaN Template for Monolithic Integrated

Full-Color InGaN Light-Emitting Diodes

Y. Yasuda, R. Tanabe, M. Uemukai, T. Tanikawa and R. Katayama

Graduate School of Engineering, Osaka University

P1-A015 (online video + poster)

Time-averaged response of superparamagnetic tunnel junctions to magnetic field and current

K. Kobayashi^{1,2}, W.A. Borders^{1,2}, S. Kanai^{1,3-5}, K. Hayakawa^{1,2}, H. Ohno^{1,2,4-7}, and S. Fukami^{1,2,4-7}

¹Laboratory for Nanoelectronics and Spintronics, RIEC, Tohoku University,

²Graduate School of Engineering, Tohoku University, ³CSRN, Tohoku University,

⁴DEFS, Tohoku University, ⁵CSIS, Tohoku University, ⁶WPI-AIMR, Tohoku University, ⁷CIES, Tohoku University

[Session P1-B (14:15-15:30)]

P1-B01 (online video + poster)

Fabrication of rutile germanium dioxide thin film with high growth rate

under highly oxygen-rich condition and its structural properties

H. Takane and K. Kaneko

Kyoto University

P1-B02 (online video + poster)

Crystallization of Ni catalyst for direct precipitation of multilayer graphene

---Crystallized Ni layer for graphene 2D nucleation growth---

S. Naritsuka, T. Murahashi, M. Kazuki, A. Nakashima, T. Soga, and T. Maruyama

Meijo University

P1-B03 (online video + poster)

Challenge to Synthesize Ferroelectric Metal Oxide (HZO and BTO) Crystalline Thin Films

by Digitally Processed DC Sputtering with Pulsed Oxidation

K. Takamura*, Y. Zhang*, Y. Tanaka**, S. Saisho**, and H. Isshiki*

*Graduate School of Informatics and Engineering, The University of Electro-Communications,

**Market Development Section, Shincron Co. Ltd.

P1-B04 (online video + poster)

Fabrication of GaN Polarity Inverted Structure via Ultrathin AlN Oxidation Interlayer

using Metalorganic Vapor Phase Epitaxy

T. Murata, T. Tanikawa, M. Uemukai and R. Katayama

Osaka University

P1-B05 (online video + poster)

In-situ monitoring of GaN crystal growth by the Na-flux method via electrical resistance measurement
K. Itozawa*, R. Tandryo*, K. Murakami*, M. Imanishi*, S. Usami*, M. Maruyama*, M. Yoshimura** and Y. Mori*
*Graduate School of Engineering, Osaka University, **ILE, Osaka University

P1-B06 (online video + poster)

Effect of high pressure and high temperature treatment on erbium implanted diamond
D. Toriu*, K. Higashiura*, R. Fukuta*, F. Ishikawa**, T. Shinmei** and T. Irifune**
*Graduate School of Science and Engineering, Ehime University, **Geodynamics Research Center, Ehime University

P1-B07 (online video + poster)

Indium Composition Dependence of Internal Quantum Efficiency in InGaN Quantum Wells
Measured by Simultaneous Microscopic Photoacoustic and Photoluminescence Spectroscopy
K. Mori*, Y. Takahashi*, Y. Morimoto*, A. A. Yamaguchi*, S. Kusanagi**, Y. Kanitani**, Y. Kudo**, and S. Tomiya**
*Kanazawa Institute of Technology, **Sony Group Corporation

P1-B08 (online video + poster)

Anisotropy of electrical characteristics in m-face α -Ga₂O₃ grown by mist CVD
S. Yamashita*, J. Kikawa*, S. Yagy**, T. Shinohe** and T. Araki*
*Ritsumeikan University, **FLOSFIA Inc

P1-B09 (online video + poster)

Bandgap energy dependence on Bi content in low-temperature-grown GaAs_{1-x}Bi_x
S. Saito, T. Umenishi and Y. Tominaga
Hiroshima University

P1-B010 (online video + poster)

Transient temperature evaluation of GaN bonded on carbon material
H. Saito*, A. Fukui*, T. Obata*, L. Li*, A. Tanaka**, T. Suga**, K. Takeuchi**, A. Wakejima*
*Nagoya Institute of Technology, **Nagoya University, ***Meisei University

P1-B011 (online video + poster)

Single Photon Generation from an AlGaIn Localization Center
M. Arita*, M. Holmes**, and Y. Arakawa*
*NanoQuine, University of Tokyo, **IIS, University of Tokyo

P1-B012 (online video + poster)

Light Extraction Structure of CirD (Circular Defect in 2D photonic crystal) Laser
S. Aomori, K. Kaichi, I. Sada, M. Morifuji, H. Kajii, A. Maruta and M. Kondow
Graduate School of Engineering, Osaka University

P1-B013 (online video + poster)

Efficiency Evaluation of GaN Transverse Quasi-Phase-Matched Wavelength Conversion Device
under Femtosecond Laser Excitation
N. Yokoyama*, H. Honda*, T. Murata*, K. Serita**, H. Murakami**, M. Tonouchi**,
S. Tokita**, S. Ichikawa**, Y. Fujiwara*, M. Uemukai*, T. Tanikawa* and R. Katayama*
* Graduate School of Engineering, Osaka University, ** Institute of Laser Engineering, Osaka University,
***Research Center for UHVEM, Osaka University

P1-B014 (online video + poster)

Proton NMR signal detection by TMR sensors
M. Oogane*, ***, ***, H. Wagatsuma*, K. Fujiwara**, S. Kumagai**, H. Matsuzaki** and Y. Ando*, ***, ***,
*Department of Applied Physics, Tohoku Univ., **Spin Sensing Factory Corp.,
CSIS, Tohoku Univ., *CSRN, Tohoku Univ.

Break (15:30-15:40)

Poster Session 2 (15:40-18:10)

[Session P2-A (15:40-16:55)]

P2-A01 (online video + poster)

InGaIn growth on ScAlMgO₄ substrate via tri-halide vapor phase epitaxy
I. Kobayashi, K. Ema, R. Hieda, H. Murakami and A. Koukitu
Tokyo University of Agriculture and Technology

P2-A02 (online video + poster)

Effect of growth temperature on crystal orientation of 2D islands in GaN remote epitaxy on graphene/r-plane sapphire substrate

K. Niwa*, M. Nonogaki*, Y. Kato*, Y. Fukunishi*, T. Maruyama** and S. Naritsuka*

*Department of Materials Science and Engineering, Meijo University,

**Department of Applied Chemistry, Meijo University

P2-A03 (online video + poster)

Fabrication of OVPE-GaN substrate with low absorption coefficient by defect suppression for laser slicing

H. Mifune*, S. Usami*, M. Kamiyama*, M. Imanishi*, M. Maruyama*, M. Yoshimura*, T. Sumi**,

J. Takino**, Y. Okayama**, M. Hata***, M. Isemura****, Y. Mori*

*Graduate School of Engineering, Osaka University, **Panasonic Corporation,

Itochu Plastics Inc., *Sosho-Ohshin Inc.

P2-A04 (online video + poster)

Facile Synthesis of Doped Metal Oxide Nanotubes via Chemical Etching Derived Atomic Diffusion

K. Nagashima*,** J. Liu*, H. Yoshida***, T. Hosomi*,** T. Takahashi*,** G. Zhang*,

M. Kanai*** and T. Yanagida*,***

*The University of Tokyo, **JST PRESTO, ***Osaka University

P2-A05 (online video + poster)

Impact of oxygen plasma condition on resistivity of RF magnetron sputtered NiO thin films

M. Murayama*, A. Ishikawa*, T. Yamaguchi*, T. Honda*, K. Sasaki**, A. Kuramata**, and T. Onuma*

*Kogakuin University, **Novel Crystal Technology, Inc.

P2-A06 (online video + poster)

AlGaOx Nanowires Phosphor Providing White Light Obtained by Wet Oxidation of AlGaAs

T. Tanigawa, R. Tsutsumi and F. Ishikawa

Ehime University

P2-A07 (online video + poster)

Photoluminescence study of high-purity GaN homoepitaxial layers grown by hydride vapor phase epitaxy

H. Imashiro*, R. Yamahida*, H. Kanamori*, R. Watanabe*, T. Kimura**, T. Konno**,

H. Fujikura**, and A. A. Yamaguchi*

*Kanazawa Institute of Technology, **SCIOCS Co. Ltd.

P2-A08 (online video + poster)

Efficient excitation states with above-bandgap energy in Tb-doped Al_{1-x}Ga_xN grown by OMVPE

R. Komai*, S. Ichikawa*,** H. Hanzawa***, J. Tatebayashi*, Y. Fujiwara*

*Graduate School of Engineering, Osaka University, **Research Center for UHVEM, Osaka University,

***Graduate School of Engineering Science, Osaka University

P2-A09 (online video + poster)

Photoluminescence properties of MBE-regrown GaN on free-standing GaN substrate

D. Nakayama, R. Imamura, S. Mouri and T. Araki

Ritsumeikan University

P2-A010 (online video + poster)

Temperature dependence of the current voltage characteristics of Ni Schottky barrier diodes

on highly doped n type α Ga₂O₃

Y. Yamafuji*, J. Kikawa*, S. Yagyuu**, T. Shinohe**, T. Araki*

*Ritsumeikan University, **FLOSFA Inc

P2-A011 (online video + poster)

Spin-orbit torque efficiency in non-collinear antiferromagnet Mn₅Sn /heavy metal heterostructures

K. Kishi^{1,2}, Y. Takeuchi³, Y. Yamane^{1,4}, J.-Y. Yoon^{1,2}, R. Takechi^{1,2}, B. Jinnai³, S. Kanai^{1,6,7,8}, J. Ieda⁵,

H. Ohno^{1,2,3,7,8}, and S. Fukami^{1,2,3,7,8}

¹RIEC, Tohoku Univ., ²Graduate School of Engineering, Tohoku Univ., ³WPI-AIMR, Tohoku Univ.,

⁴FRIS, Tohoku Univ., ⁵ASRC, JAEA, ⁶CSRN, Tohoku Univ., ⁷CSIS, Tohoku Univ., ⁸CIES, Tohoku Univ.

P2-A012 (online video + poster)

Quasi-Fermi-Level Separation Gained by Adiabatic Intraband Photo-Excitation

in Two-Step Photon Up-Conversion Solar Cells

S. Asahi, K. Watanabe, Y. Zhu and T. Kita

Kobe University

P2-A013 (online video + poster)

Design of Non-Polar/AlN Transverse Quasi-Phase Matched Channel Waveguides

for 230-nm Far-UV Second Harmonic Generation

H. Honda*, K. Shojiki**, H. Miyake**,***, M. Uemukai*, T. Tanikawa* and R. Katayama*

*Graduate School of Engineering, Osaka University, **Graduate School of Engineering, Mie University,

***Graduate School of Regional Innovation Studies, Mie University

P2-A014 (online video + poster)

Improved Fabrication of Transverse Quasi-Phase-Matched Double-Layer Polarity Inverted AlN Waveguide for 230-nm Second Harmonic Generation

S. Umeda*, H. Honda*, T. Nambu*, S. Ichikawa**, Y. Fujiwara*, K. Shojiki***, H. Miyake****, M. Uemukai*, T. Tanikawa*, and R. Katayama*

*Graduate School of Engineering, Osaka University, **Research Center for UHVEM, Osaka University,

Graduate School of Engineering, Mie University, *Graduate School of Regional Innovation Studies, Mie University

P2-A015 (online video + poster)

Crystalline quality of biogenic PbS depending on period of culture term

T. Konishi, T. Murakami, Y. Okamura, Y. Tominaga

Hiroshima University

[Session P2-B (16:55-18:10)]

P2-B01 (online video + poster)

Microstructural Characterization of GaN films Grown on ScAlMgO₄ Substrate via RF-MBE

Y. Wada*, Y. Kuroda*, S. Kayamoto*, N. Goto*, T. Fujii**, S. Mouri*, Y. Shiraiishi**, T. Fukuda**, and T. Araki*

*Ritsumeikan University, **Fukuda Crystal Laboratory Co., Ltd.

P2-B02 (online video + poster)

GaN low-angle incidence microchannel epitaxy using graphene microchannel --- Guarantee of growth selectivity ---

Y. Kato*, K. Niwa*, M. Nonogaki*, T. Maruyama**, and S. Naritsuka*

Meijo University

P2-B03 (online video + poster)

High-rate OVPE-GaN growth by the suppression of H₂O pressure with N₂O gas instead of H₂O gas in a high-temperature condition

I. Kawanami*, S. Usami*, A. Shimizu*, M. Imanishi*, M. Maruyama*, M. Yoshimura*, T. Sumi*, J. Takino**,

Y. Okayama**, M. Hata***, M. Iemura****, and Y. Mori*

*Osaka University, **Panasonic Corporation, ***Itochu Plastics Inc., ****Sosho-Ohshin Inc.

P2-B04 (online video + poster)

Growth of β -Ga₂O₃ layers by solid-source tri-halide vapor phase epitaxy

K. Yamaguchi*, K. Sasaki**, A. Kuramata**, H. Murakami*

*Tokyo University of Agriculture and Technology, **Novel Crystal Technology, Inc.

P2-B05 (online video + poster)

Comparison of self-catalyzed molecular beam epitaxial growth of GaAs nanowires on 2-inch Si(001) and Si(111) wafers

N. Danjo, K. Sakaguchi, F. Ishikawa

Ehime University

P2-B06 (online video + poster)

Growth and optical characteristics of GaN:Eu/GaN core-shell nanowires by organometallic vapor phase epitaxy

T. Otabara*, J. Tatebayashi**, S. Hasegawa*, S. Ichikawa***, M. Ashida****, and Y. Fujiwara*

*Grad. Sch. Eng., **QIQB, ***UHVEM, ****Grad. Sch. Eng. Sci., Osaka Univ.

P2-B07 (online video + poster)

Theoretical modeling of temperature-dependent PL spectra in InGaN quantum wells

S. Hakamata*, T. Fujita*, A. A. Yamaguchi*, S. Kusanagi**, Y. Kanitani**, Y. Kudo**, S. Tomiya**

*Kanazawa Institute of Technology, **Sony Group Corporation

P2-B08 (online video + poster)

Optical properties of Y₃Al₅O₁₂:Ce³⁺ -annealing and implantation dose density dependence-

S. Chiba^{1,2}, S. Kanai^{1,3-5}, J. Ishihara⁶, Y. Abe^{1,7}, K. Hatakeyama⁶, S. Fukami^{1,2,4,5,7-9}, and H. Ohno^{1,2,4,5,7-9}

¹RIEC, Tohoku University, ²Graduate School of Engineering, Tohoku University,

³Division for the Establishment of Frontier Sciences, Organization for Advanced Studies, Tohoku University,

⁴CSRN, Tohoku University, ⁵CSIS, Tohoku University, ⁶Department of Applied Physics, Tokyo University of Science,

⁷School of Engineering, Tohoku University, ⁸WPI-AIMR, Tohoku University, ⁹CIES, Tohoku University

P2-B09 (online video + poster)

Analysis of conductivity to detect antisite defects in low-temperature-grown GaAs_{1-x}Bi_x

M. Harada, T. Umenishi, Y. Takagaki, and Y. Tominaga

Hiroshima University

P2-B010 (online video + poster)

Impact of Surface Cu²⁺ of ZnO/(Cu_{1-x}Zn_x)O Core-Shell Nanowires for Directing Surface Chemical Reaction of Aldehyde Compounds

K. Nagashima**, J. Liu*, Y. Nagamatsu***, T. Hosomi**, H. Saito***, T. Takahashi**, G. Zhang*,

M. Kanai*** and T. Yanagida***

*The University of Tokyo, **JST PRESTO, ***Kyushu University

P2-B011 (online video + poster)

Evaluation of Microstructures in β -Ga₂O₃ Crystals Using Raman Mapping

M. Nakanishi*, K. Shoji*, S. Masuya**, M. Kasu***, T. Yamaguchi*, T. Honda*, K. Sasaki**, A. Kuramata**, and T. Onuma*
*Kogakuin University, **Novel Crystal Technology, ***Saga University

P2-B012 (online video + poster)

Effect of SiO₂ Under-cladding Thickness in SiN_x Optical Waveguides on Si

T. Fukushima*, R. Tsuchiya*, R. Oyamada*, T. Hizawa*, J. A. Piedra-Lorenzana*, T. Nakai**, and Y. Ishikawa*
*Toyoashi University of Technology, **SUMCO Corporation

P2-B013 (online video + poster)

Fabrication of 3.3 μ m Periodically-Poled MgO:SLT Structure for Quantum Light Sources at 810 nm

H. Nishigaki, R. Noro, M. Uemukai, T. Tanikawa and R. Katayama
Graduate School of Engineering, Osaka University

P2-B014 (online video + poster)

Anomalous Hall effect and magneto-optical Kerr effect in non-collinear antiferromagnetic Mn₃Sn thin films

T. Uchimura^{1,2}, Y. Sato^{1,3}, Y. Takeuchi^{1,4}, Y. Yamane^{1,5}, J.-Y. Yoon^{1,2}, R. Takechi^{1,2}, K. Kishi^{1,2}, S. Kanai^{1,6,7,8},
H. Ohno^{1-4,7-9} and S. Fukami^{1-4,7-9}

¹RIEC, Tohoku University, ²Graduate School of Engineering, Tohoku University,

³School of Engineering, Tohoku University, ⁴WPI-AIMR, Tohoku University, ⁵FRIS, Tohoku University,

⁶DEFS, Tohoku University, ⁷CSRN, Tohoku University, ⁸CSIS, Tohoku University, ⁹CIES, Tohoku University,

Free time (18:10-20:00)

Global Session (20:00-21:30)

Chair: Y. Otoki (SCIOCS Co. Ltd.)

GL-1 20:00 (30min)

Nanoscale InGaAs Electronics: Lessons towards transistor innovation in new material systems

Jesús A. del Alamo

Massachusetts Institute of Technology

GL-2 20:30 (30min)

GaN N-channel and P-channel Heterostructure Field Effect Transistors for High-Power, Millimeter-Wave Applications

K. Nomoto*, R. Chaudhuri*, A. Hickman*, T. Maeda*, D. Jena*, **, **, and H. G. Xing*, **, **

*School of ECE, **Department of MSE, ***Kavli Institute for Nanoscience, Cornell University

GL-3 21:00 (30min)

Present and Future of SiC Materials and Related Devices at II-VI

A.E. Souzis, S.J. Kim, U.C. Chakrabarti, D. Ahmari, S. Nagarajan and M. O'Neill

II-VI Incorporated

【October 12th, Tuesday】

Plenary Session 2 (10:00-11:00)

Chair: T. Kita (Kobe University)

Plenary-2 10:00 (60min)
Perspectives of oxide alloy semiconductors
S. Fujita
Kyoto University

Industrial Session 1 (11:00-11:30)

Session Tu1 (11:30-12:00)

Chair: Y. Otoki (SCIOCS Co. Ltd.)

Tu1 [Invited] 12:00 (30min)
NexGen Power Platform with Vertical GaN™ and NexGen Merlin Power Engine™
D. Ramanathan
NexGen Power Systems

Session Tu2 (12:00-12:30)

Chair: S. Naritsuka (Meijo University)

Tu2 [Invited] 12:30 (30min)
Novel surface structural properties realized in the graphene/SiC system
W. Norimatsu
Nagoya University

Industrial Session 2 (12:30-13:10)

Free time (13:10-14:00)

Session Tu3 (14:00-14:30)

Chair: R. Katayama (Osaka University)

Tu3 [Invited] 14:00 (30min)
Photonic Quantum Computing: Current Status and Future Prospects
S. Takeda
The University of Tokyo

Session Tu4 (14:30-15:00)

Chair: M. Oogane (Tohoku University)

Tu4 [Invited] 14:30 (30min)
Probabilistic computing with stochastic magnetic tunnel junctions
S. Fukami
Tohoku University

Industrial Session 3 (15:00-15:30)

Session Tu5 (15:30-16:00)

Chair: Y. Kangawa (Kyushu University)

Tu5 [Invited] 15:30 (30min)

Modeling and Simulation of InGaN Heterostructures and 4H-SiC MOS Inversion Layers

N. Mori, T. Hoshino, H. Tanaka, and G. Mil'nikov

Osaka University

Session Tu6 (16:00-16:30)

Chair: Y. Kangawa (Kyushu University)

Tu6 [Invited] 16:00 (30min)

Overview of Materials Informatics

S. Itoh

Foundation for Computational Science

Industrial Session 4 (16:30-17:00)

Session Tu7 (17:00-17:30)

Chair: M. Iwaya (Meijo University)

Tu7 [Invited] 17:00 (30min)

Progress and Future Challenges of SiC Power MOSFETs

T. Kimoto, K. Tachiki, and M. Kaneko

Kyoto University

Break (17:30-17:40)

EMS 40th Anniversary Ceremony (17:40-18:40)

Break (18:40-20:00)

Banquet (20:00-)

【October 13th, Wednesday】

Plenary Session 3 (10:00-11:00)

Chair: N. Fujimura (Osaka Prefecture University)

Plenary-3 10:00 (60min)
Collaboration of experimental and numerical studies of crystal growth
K. Kakimoto
Research Institute for Applied Mechanics, Kyushu University

Industrial Session 5 (11:00-11:30)

Tutorial (11:30-12:30)

Chair: N. Fujimura (Osaka Prefecture University)

Tutorial 11:30 (60min)
Future Perspectives of Silicon Integrated CMOS Devices
T. Hiramoto
The University of Tokyo

Lunch (12:30-13:20)

Industrial Session 6 (13:20-14:00)

Special Session (14:00-16:50)

Chair: M. Iwaya (Meijo University)

SP-1 14:00 (30min)
Full color QD based Micro-LED with Nanoporous structure
Y.-M. Huang, K. J. Singh, A.-C. Liu, and H.-C. Kuo
National Chiao Tung University

Break (14:30-14:40)

Chair: T. Araki (Ritsumeikan University)

SP-2 14:40 (30min)
InGaN-based RGB micro-LEDs
K. Ohkawa, Z. Zhuang, D. Iida
King Abdullah University of Science and Technology (KAUST)

SP-3 15:10 (30min)
High-Efficiency Emissions of InGaN/GaN Quantum Wells with Nanostructured Metallic and Dielectric Thin Films
K. Okamoto
Department of Physics and Electronics, Osaka Prefecture University

Break (15:40-15:50)

Chair: H. Murakami (Tokyo University of Agriculture and Technology)

SP-4 15:50 (30min)
Fabrication Technology for Micro-LEDs with PSD
H. Fujioka, K. Ueno, and A. Kobayashi
Institute of Industrial Science, The University of Tokyo

SP-5 16:20 (30min)
New Development of Eu-Doped GaN Red LED for Ultrahigh-Resolution Micro-LED Display
Y. Fujiwara*, S. Ichikawa**, Dolf Timmerman*, and Jun Tatebayashi*
*Graduate School of Engineering, Osaka University, ** Research Center for UHVEM, Osaka University

Closing Session (16:50-17:10)

【問い合わせ先】

論文・プログラム関係

〒599-8531 堺市中区学園町1-1

大阪府立大学大学院 工学研究科

藤村 紀文(論文委員長)

TEL:072-254-9332

e-mail: fujim@pe.osakafu-u.ac.jp

参加の申込みと支払い

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